

What is claimed is:

1 1. A thermokeratoplastic probe that is connected to an
2 electrical power supply, comprising:

3 a handle;

4 a tip that extends from said handle, said tip having a
5 sharp point that can be inserted into a stroma of a cornea.

1 2. The probe as recited in claim 1, further comprising
2 a stop that is attached to said tip and which limits the
3 insertion of said tip into the cornea.

1 3. The probe as recited in claim 1, wherein said tip
2 has an insertion length no greater than 400 microns.

1 4. The probe as recited in claim 1, wherein said tip is
2 supported by a spring beam that extends from said handle.

1 5. A thermokeratoplastic probe system, comprising:

2 a handle;

3 a tip that extends from said handle, said tip having a
4 sharp point that can be inserted into a stroma of a cornea;

5 a power supply connected to said tip, said power supply
6 provides a pulse of current at a power no greater than 0.2
7 watts and for a time duration no greater than 1.0 seconds,
8 such that the current flows into the cornea through said
9 inserted tip to denature the cornea.

1 6. The system as recited in claim 5, further comprising
2 a stop that is attached to said tip and which limits the
3 insertion of said tip into the cornea.

1 7. The system as recited in claim 5, wherein said tip
2 has an insertion length no greater than 400 microns.

1 8. The system as recited in claim 5, wherein said tip
2 is supported by a spring beam that extends from said handle.

1 9. A method for denaturing a cornea, comprising the
2 steps of:

- 3 a) inserting a tip into a stroma of a cornea;
- 4 b) energizing said tip with electrical current to heat
5 and denature the cornea; and,
- 6 c) removing said tip from the cornea.

1 10. The method as recited in claim 9, further
2 comprising the steps of repeating steps a)-c) a plurality of
3 times in a pattern about the cornea.